



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

cetes which at all resembles the free cell formation in the ascus, where the spores are cut out of the ascus plasm by the revolution of the aster rays. In the Phycomycetes we have isolation of the "protospores" by successive irregular segmentations, not simultaneous, but progressive. "This progressive segmentation has no parallel in the asci, where from the start a single nucleus forms the center for the formation of each daughter-cell" (p. 517). Harper finds it possible to connect the cleavage processes of the Phycomycetes with other cases of division by constriction, as in cell division in *Cladophora*, or in the abstriction of conidia in *Erysiphe*, as described by him, but he finds no connecting link between this general process of spore delimitation and free cell formation in the ascus. This stands as opposed to the older view of Brefeld that the ascus merely represents an evolution out of the ancestral sporangium, from an indefinite to a definite number of spores of definite size and form. Moreover, in the origin and character of the "epiplasm," regarded as a distinctive feature of the ascus, and that of the "episporal slime" of the sporangium, Harper finds no connection whatever. A possible origin of the processes seen in the ascus is suggested tentatively in such phenomena as Strasburger described (*Zellbildung und Zelltheilung*) for swarm-spore formation in *Oedogonium*. This, however, the author has not as yet been able to confirm by personal investigation.

The general conclusion is that the Ascomycetes cannot have arisen from the Phycomycetes, — the ascus seems to stand by itself as a peculiar structure, whose origin is at present in obscurity, — and, finally, the author's researches, together with those of Thaxter on the Laboulbeniaceæ, seem to point very strongly to a multiple algal origin of the fungi and the subsequent independent evolution of certain forms of spore production by different groups.

H. F. ROBERTS.

**Notes.** — The Cactaceæ of the Galapagos Islands are passed in review, by Dr. Albert Weber, in the *Bulletin* of the Paris Museum for 1899, and four species are recognized, of which two, pertaining to the genus *Cereus*, are characterized as new, while the other two, belonging to the genus *Opuntia*, were described and named in 1898.

A. Purpus, of the Darmstadt Botanical Garden, publishes an article on North American cacti which have proved hardy in Germany, in *Die Gartenwelt* of January 7. Several reproductions from photographs represent the species referred to.

Dr. Schumann contributes an article on the art of collecting cacti to the *Notizblatt* of the Berlin Botanical Garden of December 29.

*Parsonsia paddisoni*, a new apocynaceous plant yielding large edible tubers, is described by R. T. Baker in No. 95 of the *Proceedings of the Linnæan Society of New South Wales*, which contains several other papers of botanical interest.

The botany of New Zealand receives fourteen contributions, covering various groups of flowering plants and cryptogams, and abundantly illustrated, in the twenty-third volume of the *Transactions and Proceedings of the New Zealand Institute*, the frontispiece for which is a portrait of the veteran botanist Colenso.

A study of the seed dispersal of *Pinus sylvestris* and *Betula alba*, the results of which are published by Robert Smith in the *Annals of Scottish Natural History* for January, shows that the seeds of the former have been effectively carried by the wind to a distance of 886 yards, and of the latter to a distance of 489 yards, from the parent trees.

The most imposing brochure of the first volume of the *Proceedings of the Washington Academy of Sciences*, the publication of which has just been concluded, and the form, typography, illustration, and make-up of which constitute a model worthy of the study of all publishing bodies, is devoted to a description of a new genus and twenty new species of fossil cycadean trunks from the Jurassic of Wyoming, by Professor Lester F. Ward.

The geographical distribution of *Solanum carolinense*, *Tribulus terrestris*, and *T. maximus*, is discussed by Pammel in *Bulletin No. 42* of the Iowa Agricultural College.

The lime content of the soil, which plays an important rôle in the growth of certain plants, has been carefully worked out about Cognac by Guillon, whose results, with especial reference to viticulture, are given in the *Revue de Viticulture* for January 6, with the aid of a colored map.

The "Report on the Progress of Pharmacy," in the *Proceedings of the American Pharmaceutical Association* for 1899, contains a large amount of information, tabulated by plant families, which is not likely to be found so readily elsewhere by botanical students.

The results of all available American chemical analyses of nuts, and a discussion of the value of nuts as food for man, are contained in *Bulletin No. 54* of the Maine Agricultural Experiment Station.

*Farmers' Bulletin* No. 108 of the Department of Agriculture at Washington deals with saltbushes, — plants adapted to salt or alkaline regions, — and is written by Dr. P. B. Kennedy.

The *Bulletin de l'Herbier Boissier*, under the editorial care of M. Autran, curator of the herbarium which was founded by Boissier and is maintained near Geneva by M. Barbey, suspends publication on the conclusion of Vol. VII. It is to be continued by a series of octavo *Mémoires*, the first of which, a continuation of Professor Schinz's "Pflanzenwelt Deutsch-Südwest-Afrikas," was issued on Jan. 15, 1900.

An interesting account of the one-time London Botanic Garden, established by Salisbury in 1807, and the later history of which seems to have passed into oblivion, is given by W. Roberts in the *Gardeners' Chronicle* of February 3.

The *Gardeners' Chronicle* of February 24 contains a figure of the monument to David Douglas in the parish churchyard at Scone and a transcript of the inscription which it bears, as well as a portrait and short biographical sketch of this interesting man, of whom it has been said that no other collector has ever reaped such a harvest in America, or associated his name with so many useful plants, and that nobody, not even Fortune, has conferred so much honor on the Royal Horticultural Society, and so much benefit to horticulture in general as regards the importation of plants.

A good portrait of Professor A. S. Hitchcock, who is this year Director (or President) of the Académie Internationale de Géographie Botanique, is issued with the March *Bulletin* of that organization.

The first fascicle of Vol. XVII of *La Cellule* has as frontispiece a portrait of the late Professor J. B. Carnoy, and contains the address delivered at his funeral by Dean Gilson of the University of Louvain.

Portraits of the Tulasne brothers form the frontispiece to Vol. XVI of the *Bulletin* of the Société Mycologique de France.

Dr. Willis, Director of the Royal Botanic Gardens at Peredeniya, Ceylon, calls attention to the new research station of that important establishment, in the *Botanical Gazette* for March. The facilities of the garden are freely offered to competent investigators.

The March number of the *Journal of the New York Botanical Garden* contains an interesting account of the herbarium of the New York Garden and of its new home.

The genus *Cratægus* receives a further accession of eleven new species for the Eastern States in a contribution by W. W. Ashe to the *Journal of the Elisha Mitchell Scientific Society*, published in February.

The results of an experimental study by Henseval of abrine, the highly toxic albuminoid of *Abrus precatorius*, are published in the current volume of *La Cellule*.

*Cereus mojavensis*, one of our interesting desert cacti, is figured in the *Botanical Magazine* for March.

A revision of the species of *Plantago* commonly referred to *P. Patagonica*, by E. L. Morris, appears in the *Bulletin of the Torrey Botanical Club* for March, and apparently contains the results of careful study.

The North-American species of *Chætochloa* are revised by Scribner and Merrill in *Bulletin No. 21* of the Division of Agrostology of the United States Department of Agriculture.

In a note in the *Journal of Botany* for February, Dr. Masters states that while the *Glyptostrobilus pendulus* of English gardens is merely a variety of *Taxodium distichum*, there is a true *Glyptostrobilus*, which, while in garden specimens that have not yet reached the fruiting age cannot be separated from *Taxodium*, is yet amply distinct when fruiting, in its elongated (not peltate), cone-scaled and evidently winged seeds.

A supposed bigeneric hybrid between *Cystopteris fragilis* and *Asplenium Trichomanes* is described from the Jura by Parmentier in the *Bulletin de l'Académie Internationale de Géographie Botanique* for February.

A catalogue of the flora of Montana and the Yellowstone National Park, by Dr. Rydberg, constitutes the first volume of the *Memoirs of the New York Botanical Garden* — a volume of nearly 500 pages, issued in February, 1900.

An analytical list of the plants of Rovereto is published by Professor Stefani in Vol. V of the *Atti della I. R. Accademia . . . degli Agiati*, and should be of use to visitors to the region of the Adriatic.

A botanical bibliography of the Argentine Republic is reprinted by F. Kurtz from Vol. XVI of the *Boletin de la Academia Nacional de Ciencias de Córdoba*.

Among the applications of photography now being presented in *The Process Photogram* of London, that of recording tree forms, in the March number, is of interest to botanists, since, as the editor says, it is truly "a very difficult task to give a photographic account of a tree."

## PETROGRAPHY.

**The Petrographical Province of Essex County, Mass.** — A very careful and critical study of the igneous rocks of Essex County, Mass., is given us by Washington<sup>1</sup> in a recent series of papers in the *Journal of Geology*. The district "is characterized as one of rocks which are more acid or more basic than normal, high in alkalis, with Na<sub>2</sub>O predominating over K<sub>2</sub>O, high in iron oxides, especially FeO, rather high in Al<sub>2</sub>O<sub>3</sub>, and low in MgO and CaO." The rock types recognized are granites, quartz-syenites, diorites, essexites, gabbros, rhyolites, and the dike rocks, aplite, microgranite, diabase, paisanite, and camptonites. The essexites embrace also pulaskites and litchfieldites, characterized by the presence of albite, nepheline, ægirite, and alkaline amphiboles.

All these rocks are regarded as differential phases of a laccolitic mass, with a composition approximating that of an acid diorite.

The first differentiation of this magma is thought to have given rise to the granites, syenites, diorites, and the granito-diorite dikes, and a further local differentiation of the basic forms to foyaites, essexites, and paisanite-tinguaite dikes.

Each of the rock types occurring in the district is carefully described, and of each a chemical analysis is given. The work is thorough. As the result of the paper, Essex County becomes one of the best known petrographical provinces in the country.

The two most interesting dike rocks<sup>2</sup> of the district are a glaucophane-sölvbergite containing cordierite, and an analcite-tinguaite. Analyses of these two rocks follow:

SiO <sub>2</sub>	TiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	FeO	MgO	CaO	Na <sub>2</sub> O	K <sub>2</sub> O	H <sub>2</sub> O	P <sub>2</sub> O <sub>5</sub>	Ign.
64.28	.50	15.97	2.91	3.18	.03	.85	7.28	5.07		.08	.20 = 100.33
56.75	.30	20.69	3.52	.59	.11	.37	11.45	2.90	.04 Cl =	.28	3.18 = 99.92

**Nepheline-Syenites.** — The corundum-bearing nepheline-syenites of Ontario are of such economic interest that the Canadian official

<sup>1</sup> *Journ. of Geol.*, vol. vi, p. 787, and vol. vii, pp. 53, 105, 284, and 463.

<sup>2</sup> *Amer. Journ. Sci.*, vol. vi, 1898, p. 176.